May Update to Transportation Interim Committee

Carlos Braceras, P.E., Executive Director
Utah Department of Transportation

UDOT Keeping Utah Moving

Crash and Fatality Trends

Crash and Fatality Trends

Statewide Fatalities & Suspected Serious Injuries

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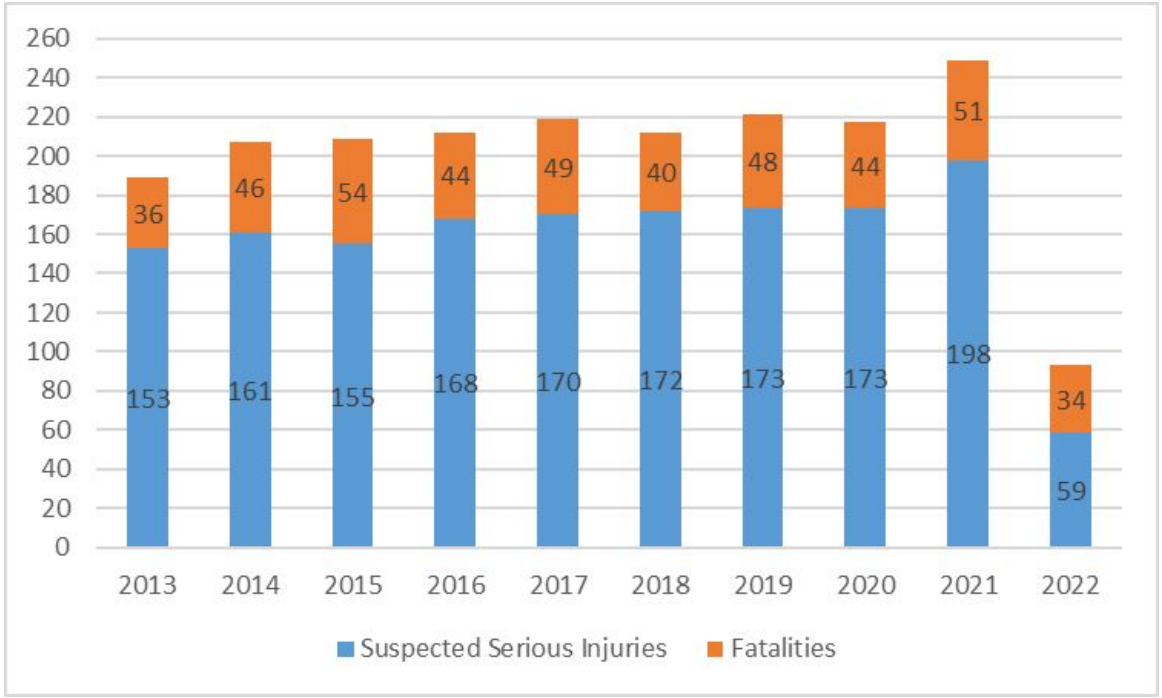
Crash and Fatality Trends

Statewide Active Transportation Fatalities & Serious Injuries



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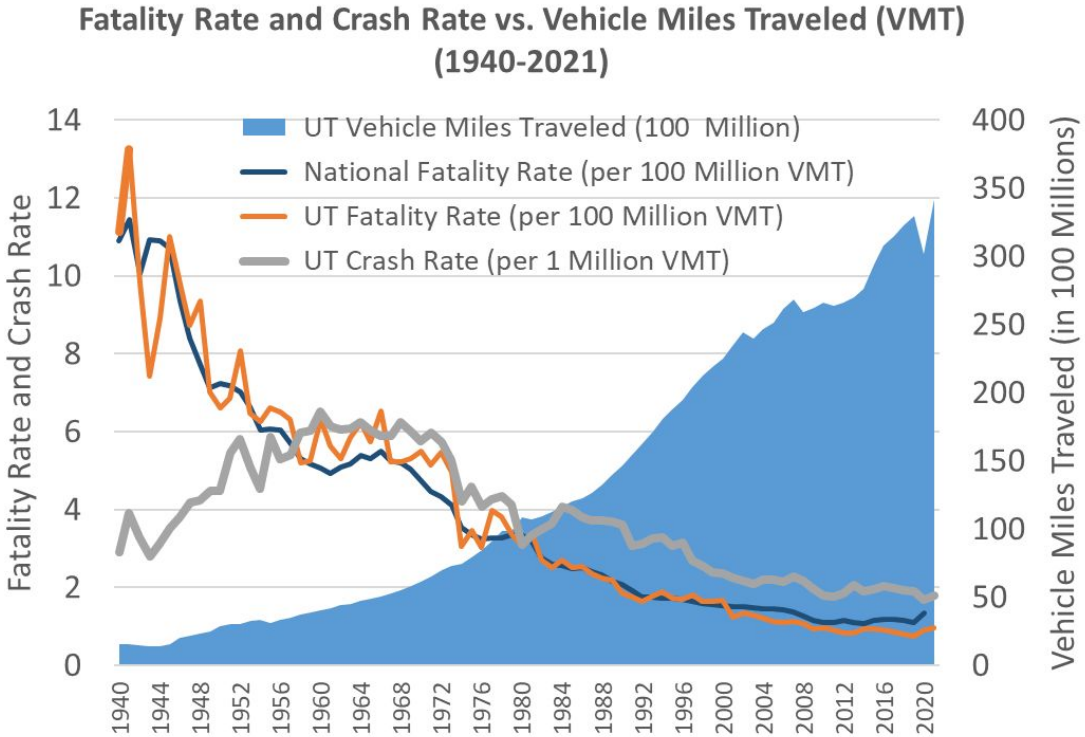
Crash and Fatality Trends

Crash Type Hierarchy Chart (2010-2021)

Crash Type		Crashes
Rear-End	198,823	29.52%
Other	189,240	28.10%
Roadway Departure	108,775	16.15%
Left Turn at Intersection	87,669	13.02%
Mid-Block Urban	49,572	7.36%
Red Light Running	14,494	2.15%
Active Transportation	13,166	1.95%
Motorcycle Involved	6,831	1.01%
Rural Highway Crossover	3,951	0.59%
Wrong Way Driving	938	0.14%

Crash and Fatality Trends



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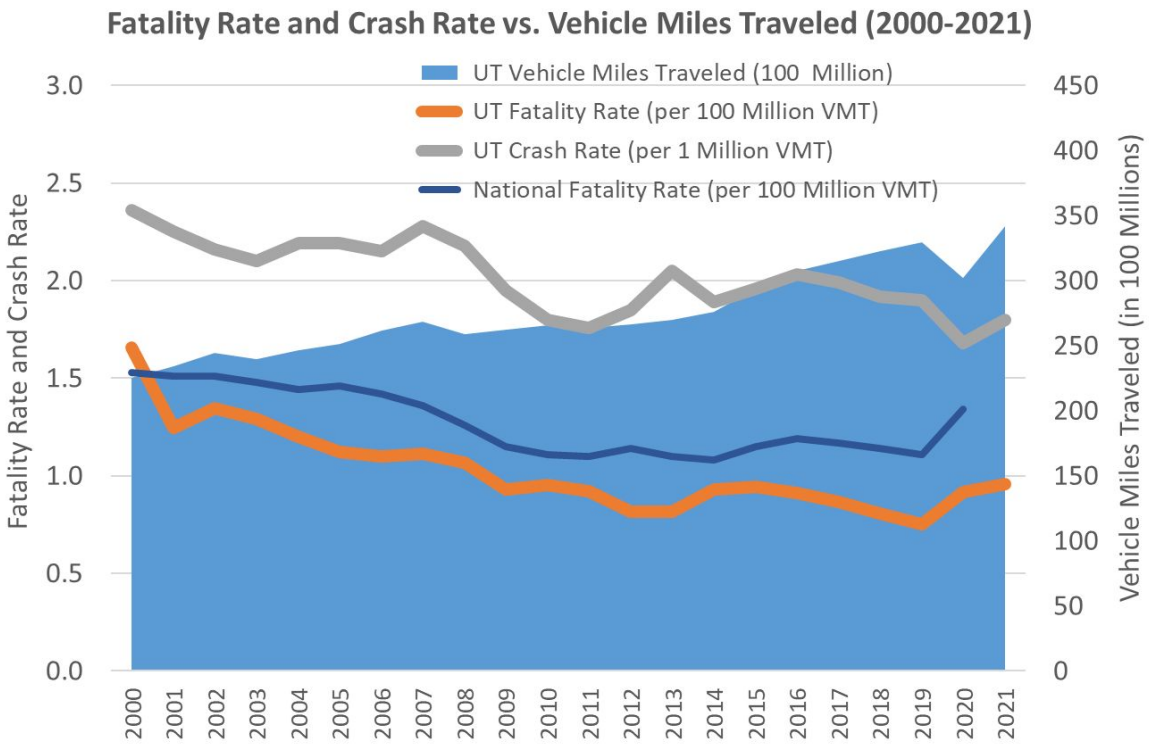
Crash and Fatality Trends



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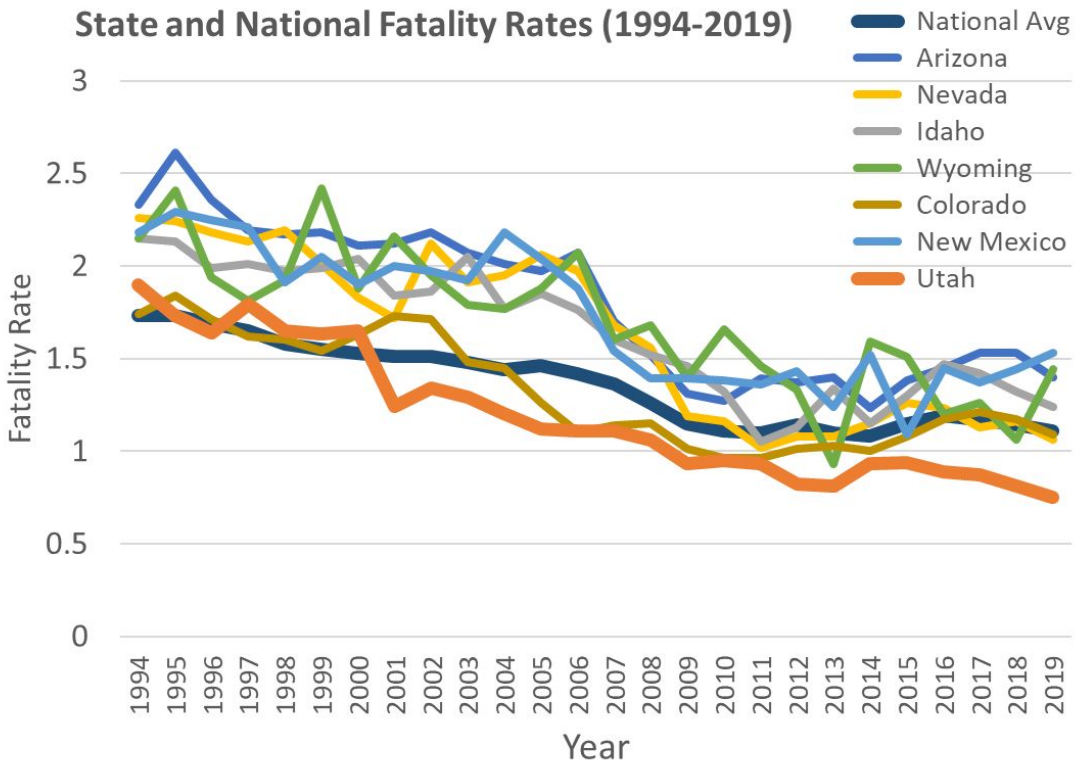
Crash and Fatality Trends



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Mountain View and Bangerter Highway

USDOT National Roadway Safety Strategy

USDOT National Roadway Safety Strategy

Six Principals to the Strategy

- Death/Serious injury is Unacceptable
- Humans Make Mistakes
- Humans are Vulnerable
- Responsibility is Shared
- Safety is Proactive
- Redundancy is Crucial

USDOT National Roadway Safety Strategy

5 Key Focus Areas of the Safe Systems and Utah's Approach

- Safer People
- Safer Roads
- Safer Vehicles
- Safer Speeds
- Post Crash Care

Wrong Way Driving

Wrong Way Driving

- Average fatalities per year versus wrong way fatalities
- Average crashes per year versus average wrong way crashes

Year	Fatalities	Wrong Way Fatalities	Total Crashes	Wrong Way Crashes
2010	253	1	47,758	9
2011	243	3	46,396	20
2012	217	1	49,254	15
2013	220	0	55,463	11
2014	256	3	52,090	23
2015	278	4	57,526	19
2016	281	2	62,363	27
2017	273	0	62,855	13
2018	260	3	62,073	28
2019	248	1	62,411	22
2020	276	7	50,605	42
2021	328	5	61,457	25
Average	**261.1**	**2.5 (1.0%)**	**55,854**	**21.2 (0.04%)**
2022	**99**	**5 (5.1%)**	**19,752**	**14 (0.07%)**

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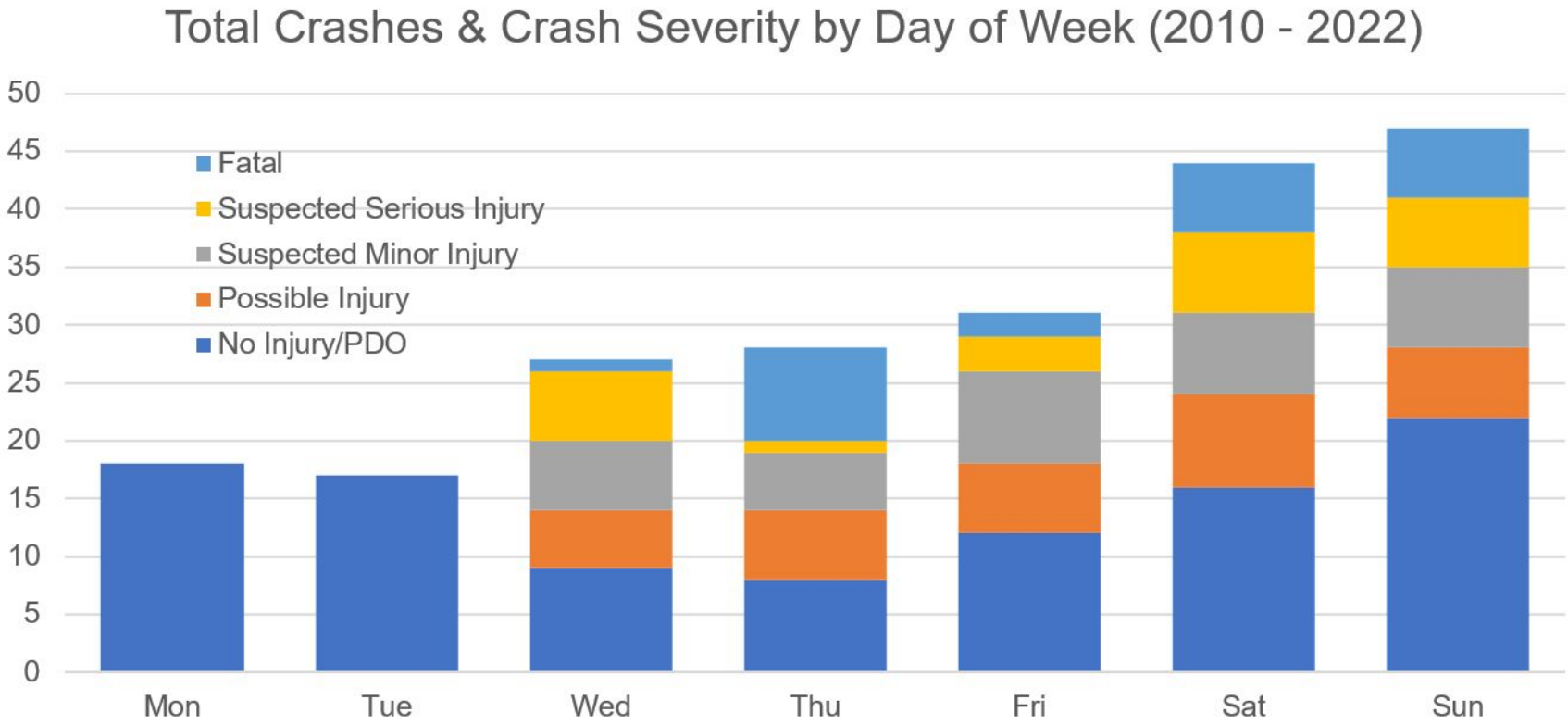
Wrong Way Driving

13% of Wrong Way Crashes are Fatal

Other fatal crash type %’s

- 0.26% of Intersection Crashes
- 0.50% of Red Light Running
- 1.05% of Roadway Departure
- 3.70% of DUI
- 4.95% of Pedestrian

Wrong Way Driving



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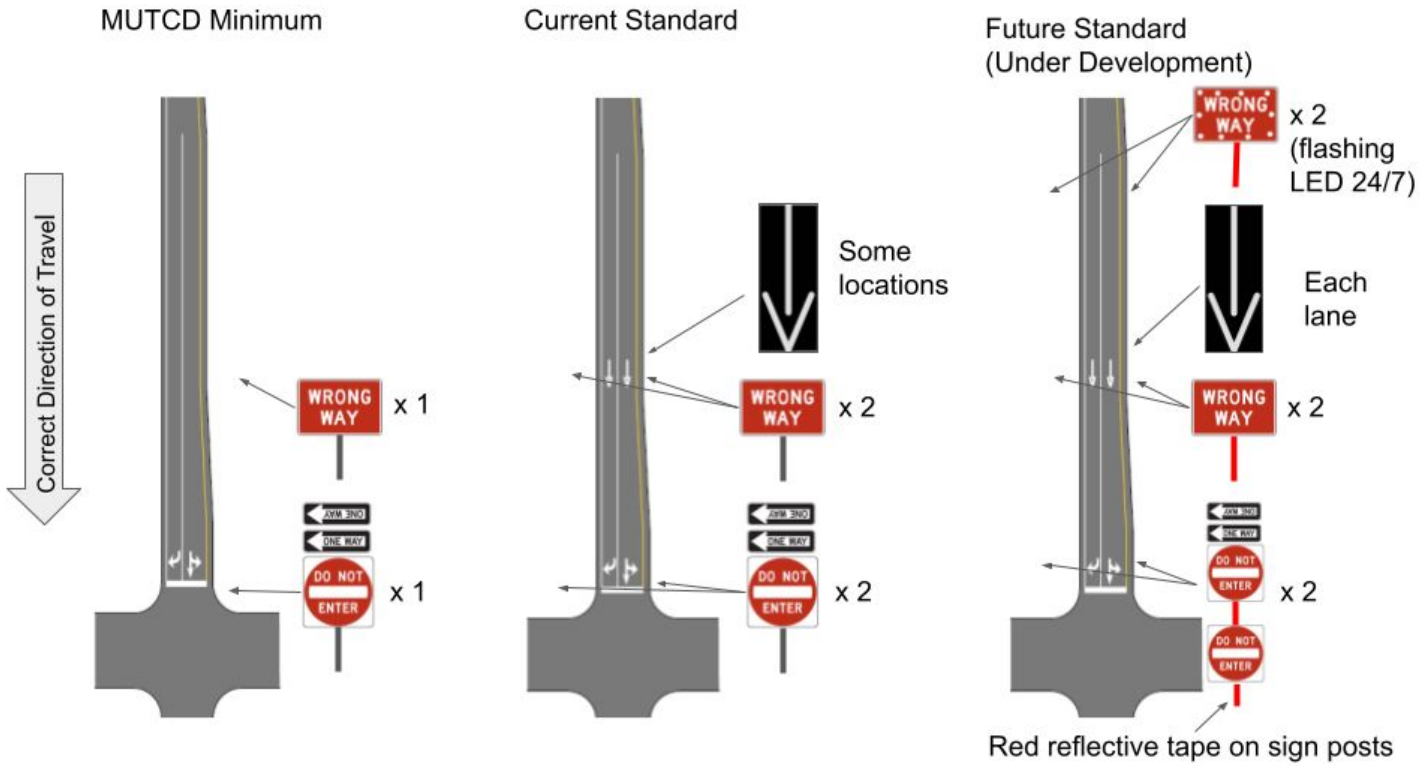
Wrong Way Driving



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Wrong Way Driving Sensors

FLIR Thermal Imaging Sensors

- Present on 42 off ramps throughout the state
- Uses thermal energy emitted from vehicles and bicyclists
- Utah wrong-way detection system $16,000 per site

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Wrong Way Driving - Sensors Next Generation

Alternative Wrong-Way Driving System

1. Activation sensors
2. Warning alerts
3. LED Illuminators for night images
4. HD Cameras capture images
5. Confirmation Sensors
6. Passive Markings
7. Software sends real-time verification of system activation
8. Future connected vehicle interface

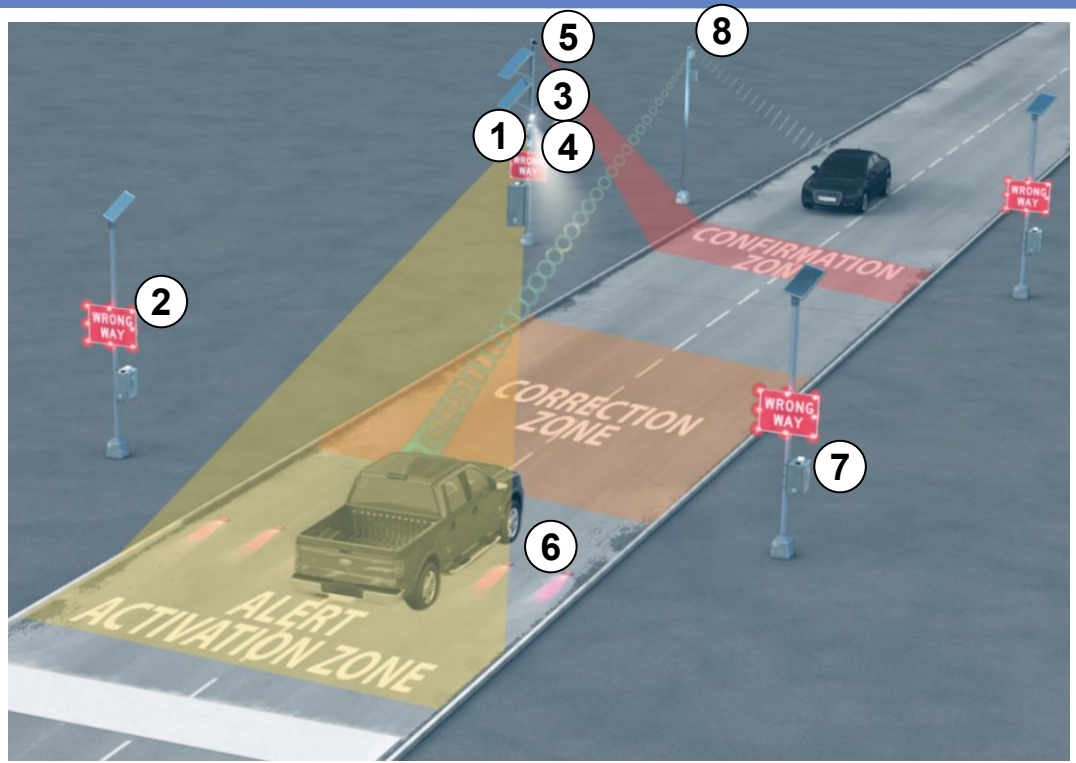


Image sourced from TAPCO

Wrong Way Driving

Other States' Efforts

- **Arizona, California, Ohio, Texas & Florida**
  - Installing new, oversized wrong-way signage (AZ,CA)
  - Lowering the wrong-way signage height from 7 feet to 3 feet (AZ,CA)
  - Installing red retro-reflective striping on signposts (AZ,FL)
  - Adding white pavement arrows pointing in the correct direction of travel (AZ,FL)
  - Adding LED illuminated WRONG WAY signs (FL, TX)
  - Adding in-pavement LED systems (CA)
  - Installing wrong way driving alert systems to detect, trigger lights, notify officials, and alert other drivers (AZ,FL,OH,TX)

Wrong Way Driving

UDOT/DPS Wrong Way Driving Working Group

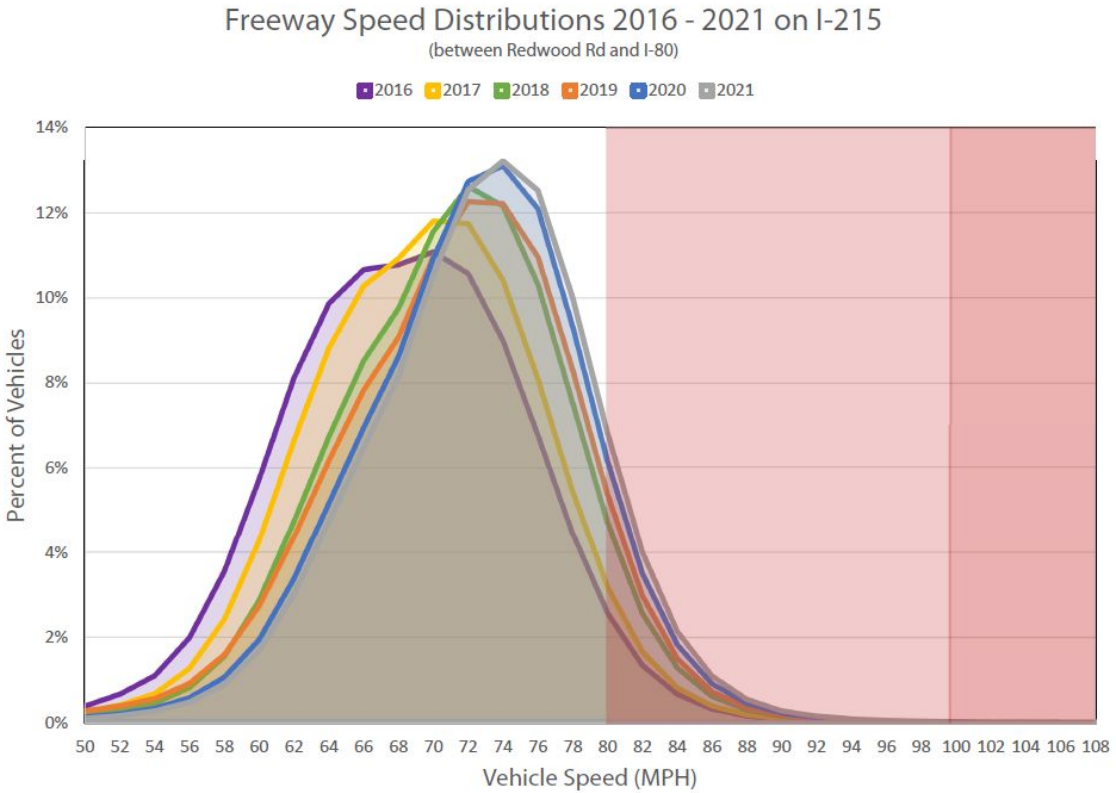
- Coordination and review of crash records and data definitions
- Field off ramp review
- Review of design standards
- Exploration of enforcement practices

UDOT Technical Assessment Team

- Quick response team focused on identifying best available wrong way driving detection system

Speeding & Aggressive Driving

Speeding & Aggressive Driving



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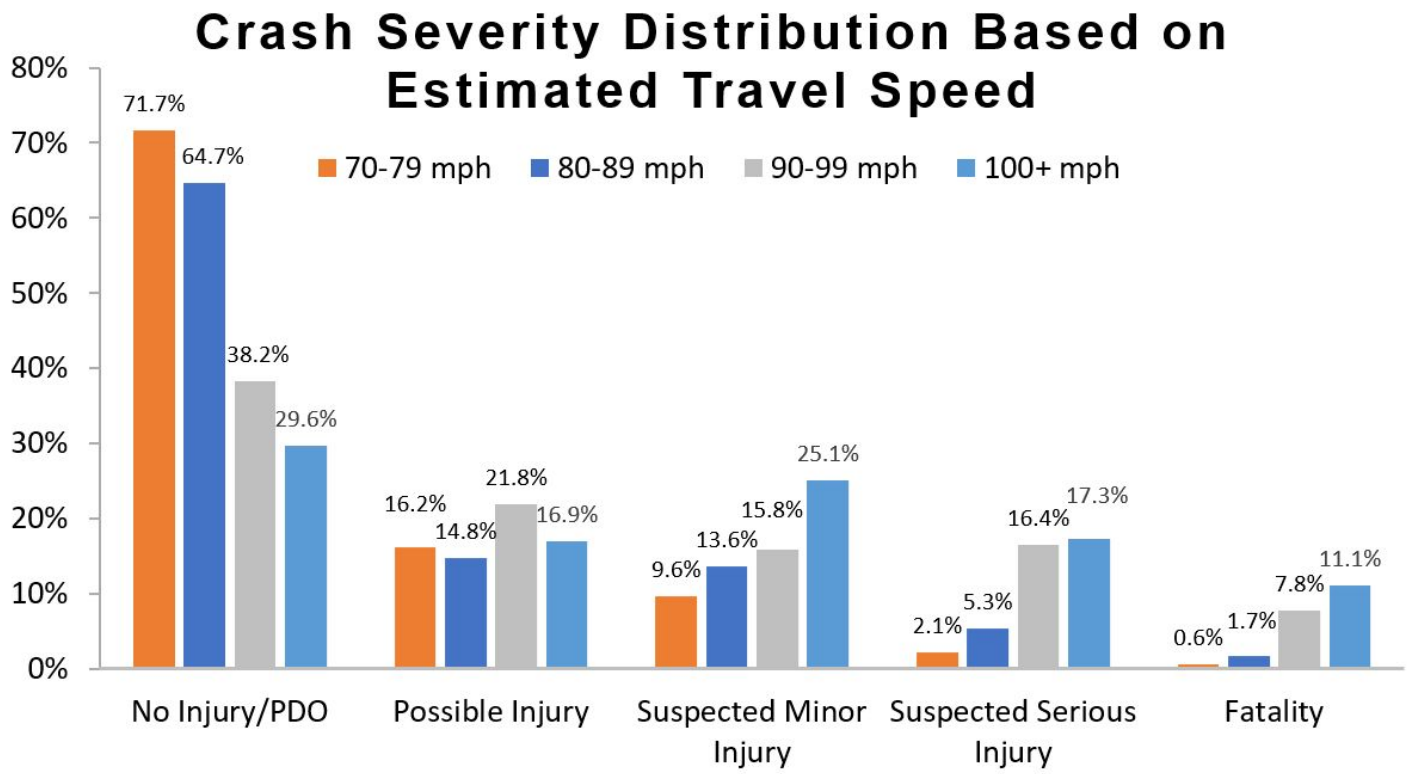
Speeding & Aggressive Driving



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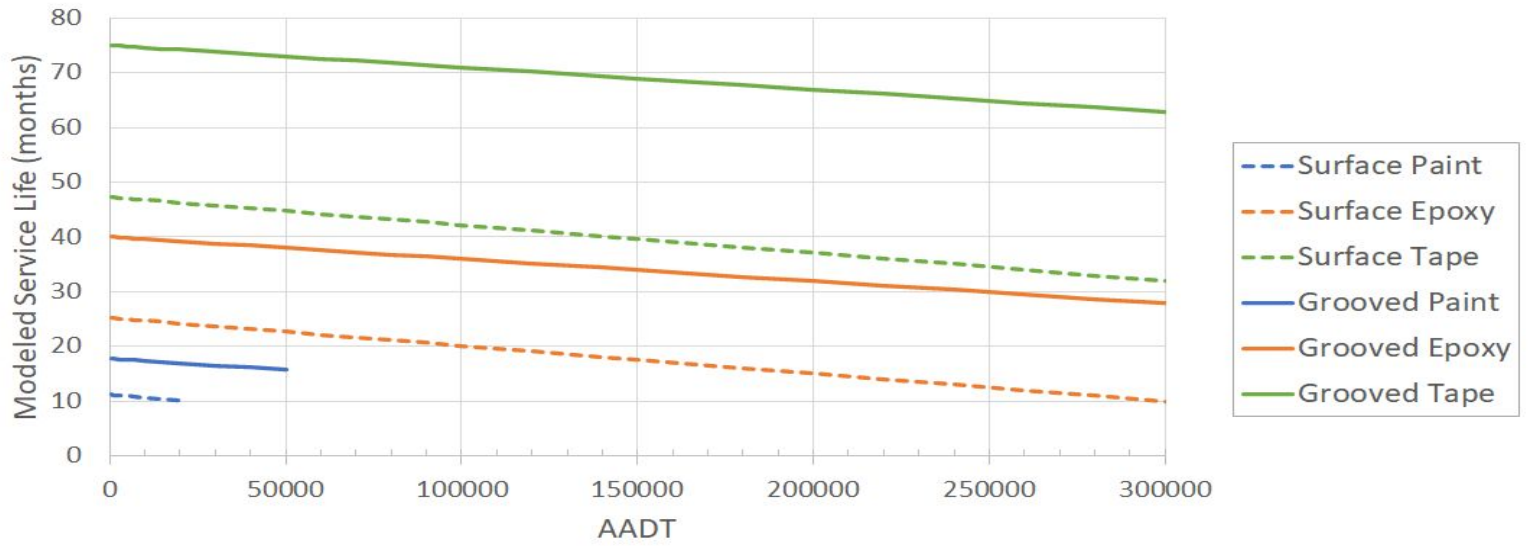
Pavement Markings

Striping degrades faster than replacement cycle.

Research demonstrates that waterborne paint service life is less than **one year.**



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Freeway Enhancement Project

Current project

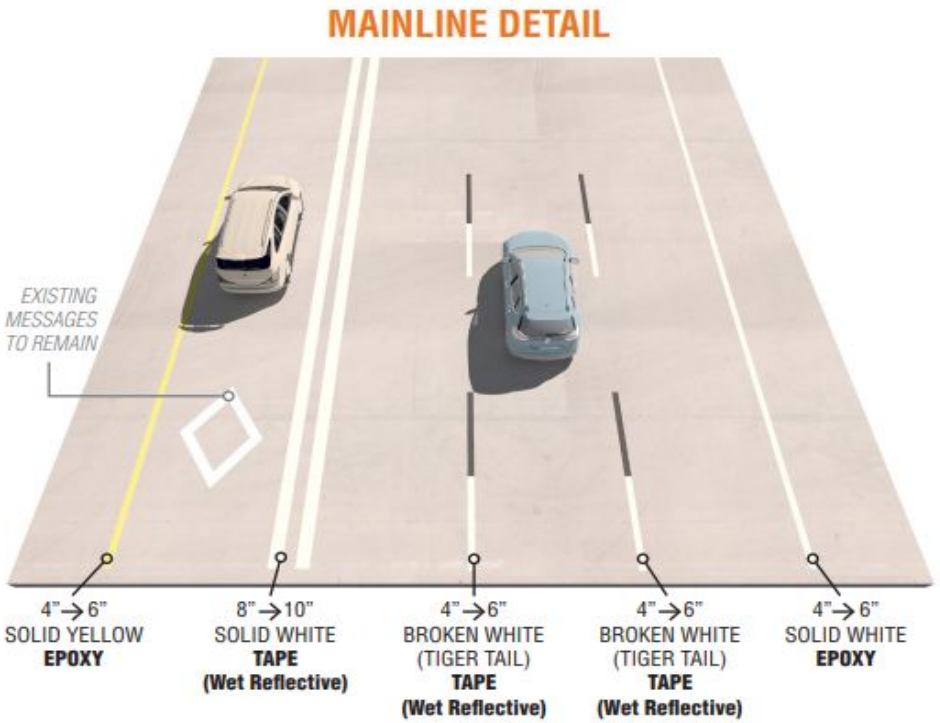
- $26m programmed
- I-15 MP 249.9-279
- ~30 miles in Utah County

Next corridors Urban Interstate (AADT>30,000)

I-215
I-80
I-84
SR-201
SR-154

2022 Session Line Item Transfer:

$6m moved from Highway Systems to Operations



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National Research - I-84 Eastbound in Tremonton

32 pavement markings being evaluated

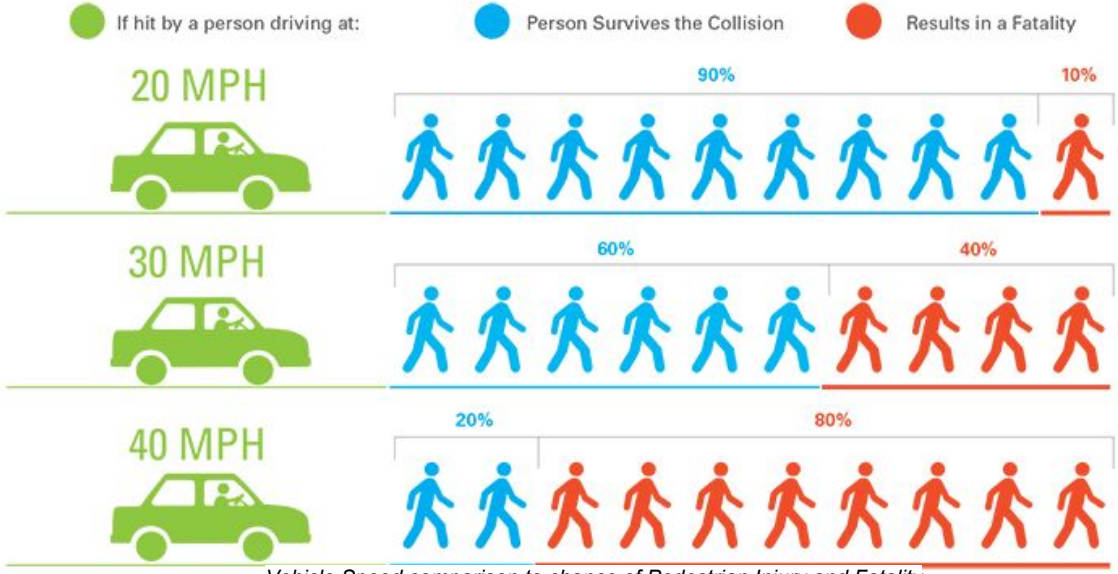
16 on asphalt and 16 on concrete surfaces

12 different products manufacturers installed multiple pavement marking products on approximately 850 lines of striping

Pedestrian & Bicycle Safety

Active Transportation

Speed Considerations



Vehicle Speed comparison to chance of Pedestrian Injury and Fatality

Data source: US Department of Transportation, Literature Reviewed on Vehicle Travel Speeds and Pedestrian Injuries. March 2000.

Image credit: San Francisco MTA Vision Zero Action Plan, February 2015: https://view.joomag.com/vision-zero-san-francisco/0685197001423594455?short

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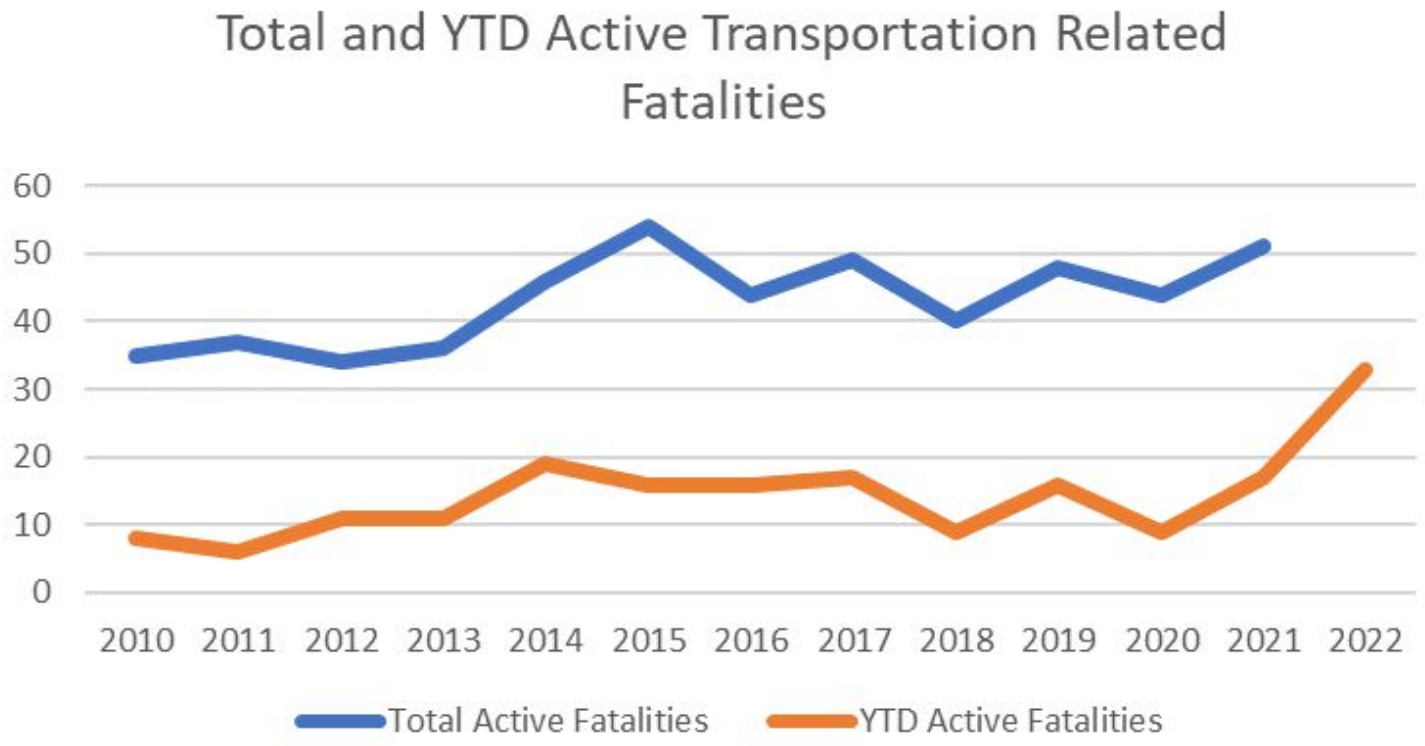
Active Transportation



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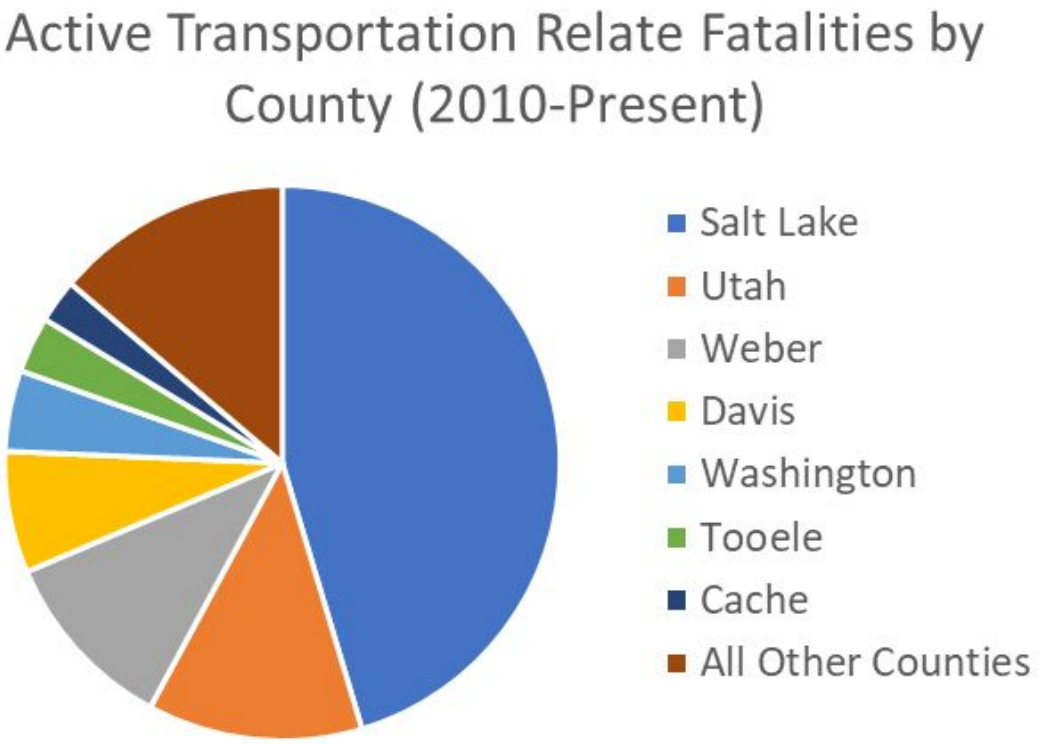
As of May 2022

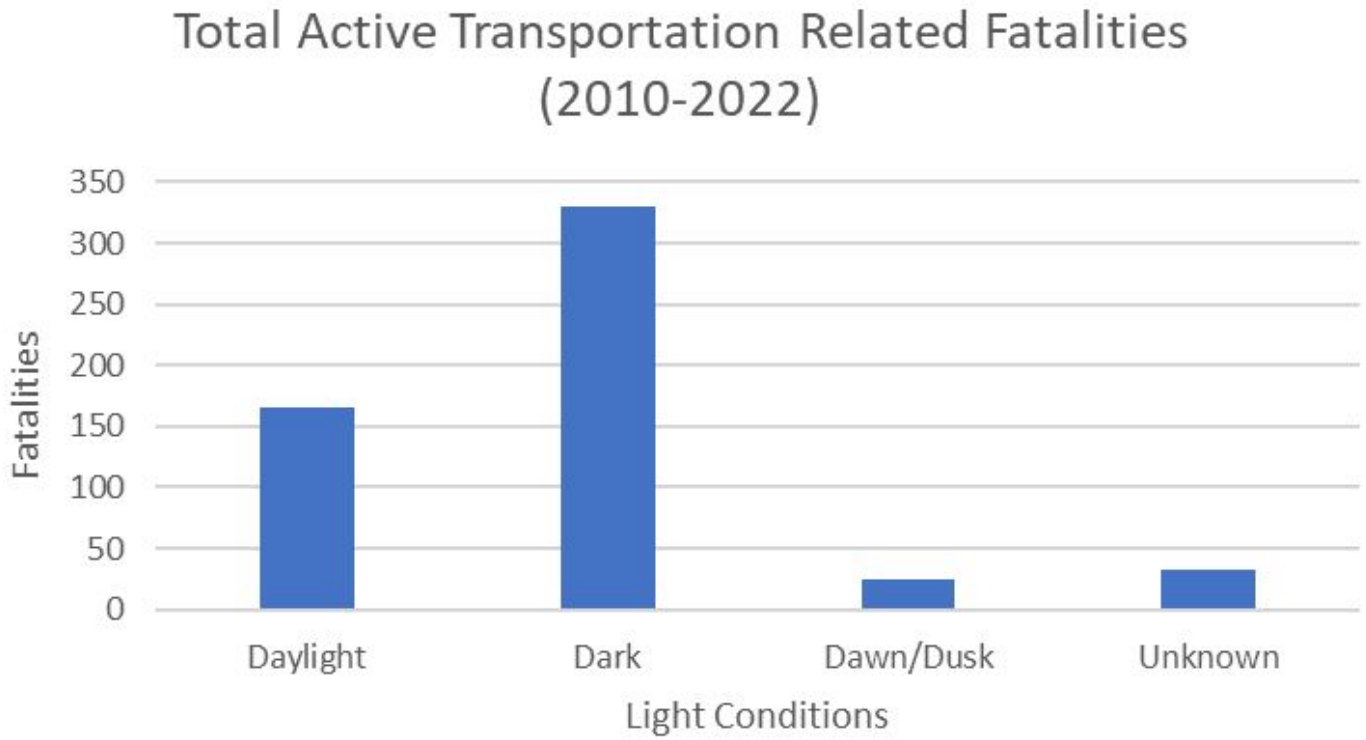
Active Transportation



As of May 2022

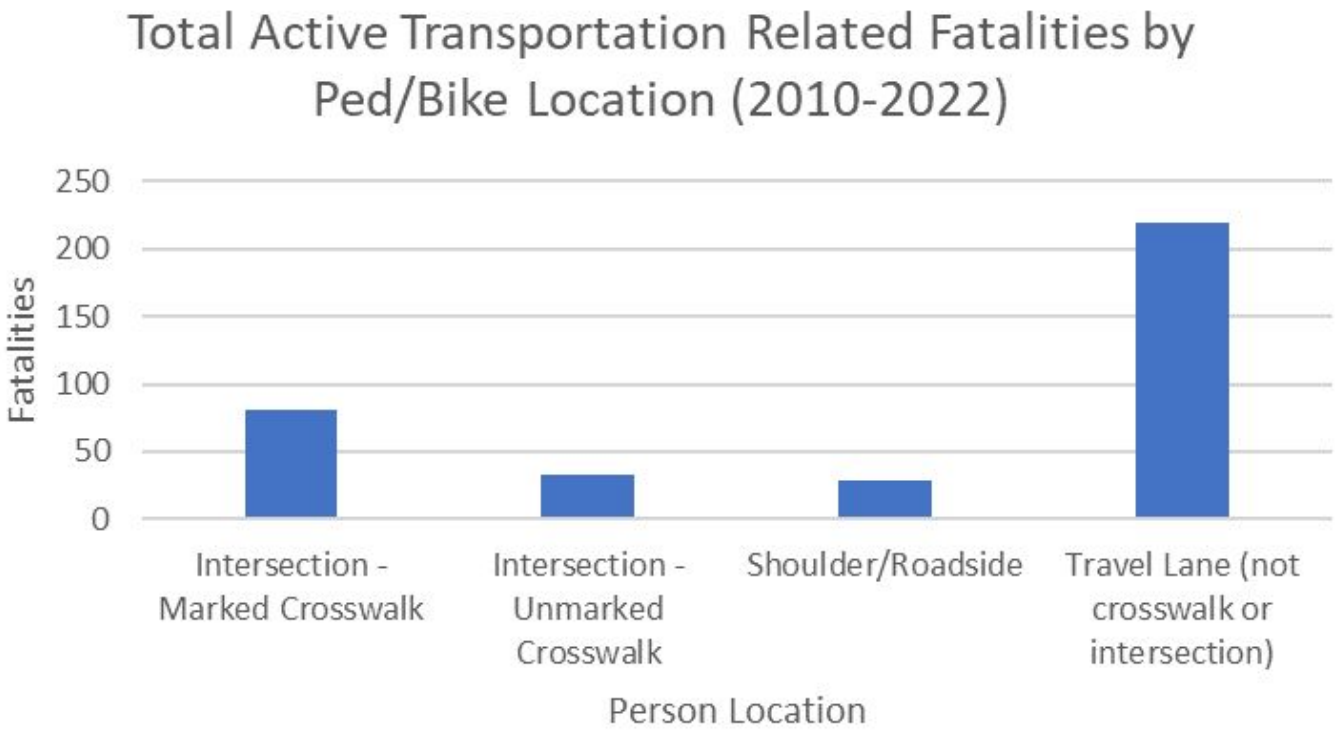
Active Transportation

Light Conditions



Active Transportation

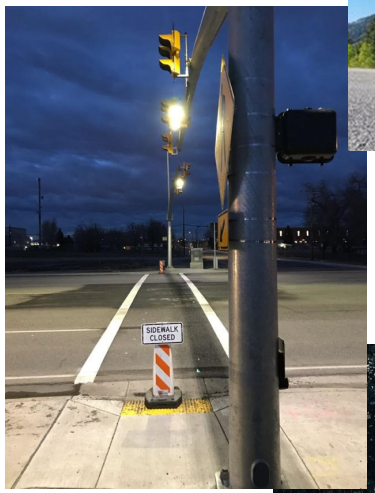
Location of Person



Active Transportation

Efforts Underway

- 15% funding of HSIP for Pedestrian and Bike Specific Safety
- 50% increase in funding for Safe Routes to School
- Behavioral Education
  - Safe Routes Utah
  - Zero Fatalities
- System Analysis
- Under Mast Arm Lighting
- Signal Timing for Pedestrians
- Work Zone standards for peds and bicyclists



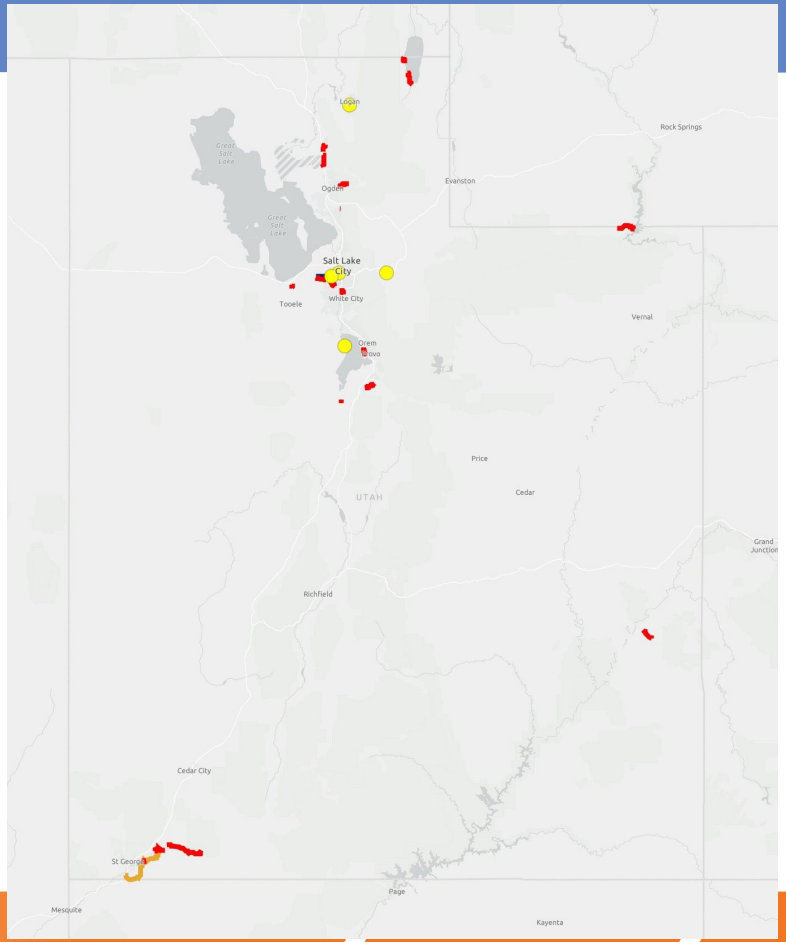
Active Transportation

2022 Session Funding

HB3 and HB409

$40m for Active Transportation

9 regionally important projects across the state will be programmed by Transportation Commission in May



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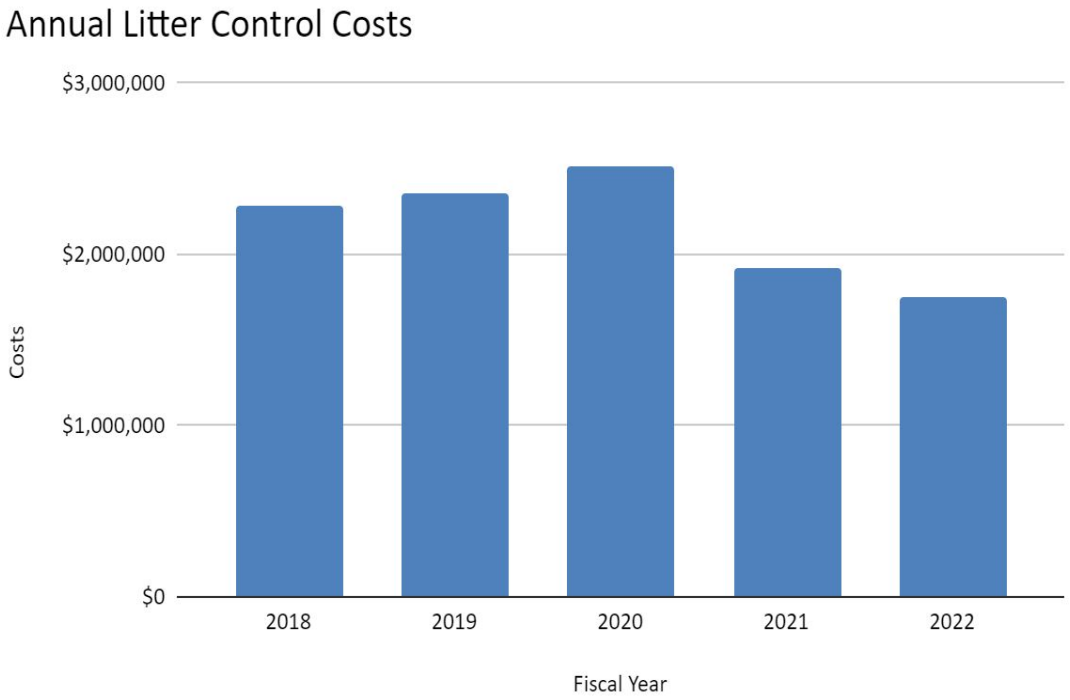
Litter on Utah Roadways

UDOT Litter Program



Annual Average Cost (5 year average)

- $2,162,253

Costs include

- Contractors and state forces
- Carcass Removal Contracts

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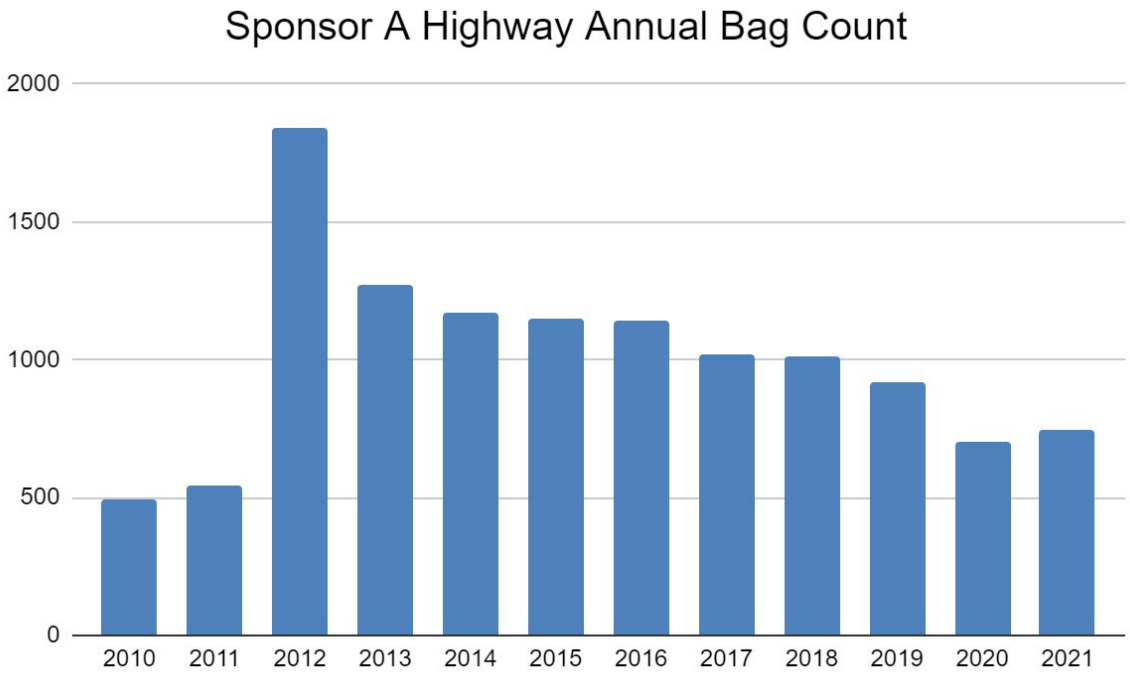
Sponsor a Highway

Used for Interstate Routes where safety of citizen groups is a concern

Funding provided by private businesses

No-cost to the state



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Litter Program

Community group requests for one time pickup

A wide variety of groups volunteer to perform litter pickups; churches, rotary clubs, unions, city employees, schools, etc.

Recently, we've allowed groups to sign up online for these pickups

We have had 6 signups in the last 3 weeks ranging from 10 people to 125 people

Impaired Driving

UDOT

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